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(54) Security cabinet

(57) A cabinet for providing protection to amusement machines such as gambling machines and the like comprises side, rear, top and base panels forming a carcass to enclose the machine on all sides except the front, and upper (21) and lower (20) panels detachably secured to the carcass. In normal use the panel 21 is unlocked from the carcass to permit access to the playing parts of the machine. The panel 20 can be unbolted from the carcass to allow access to the coin box and machine controls.

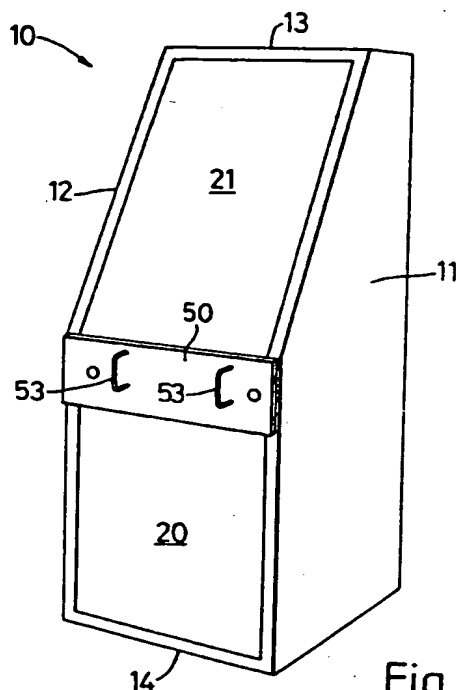


Fig. 1

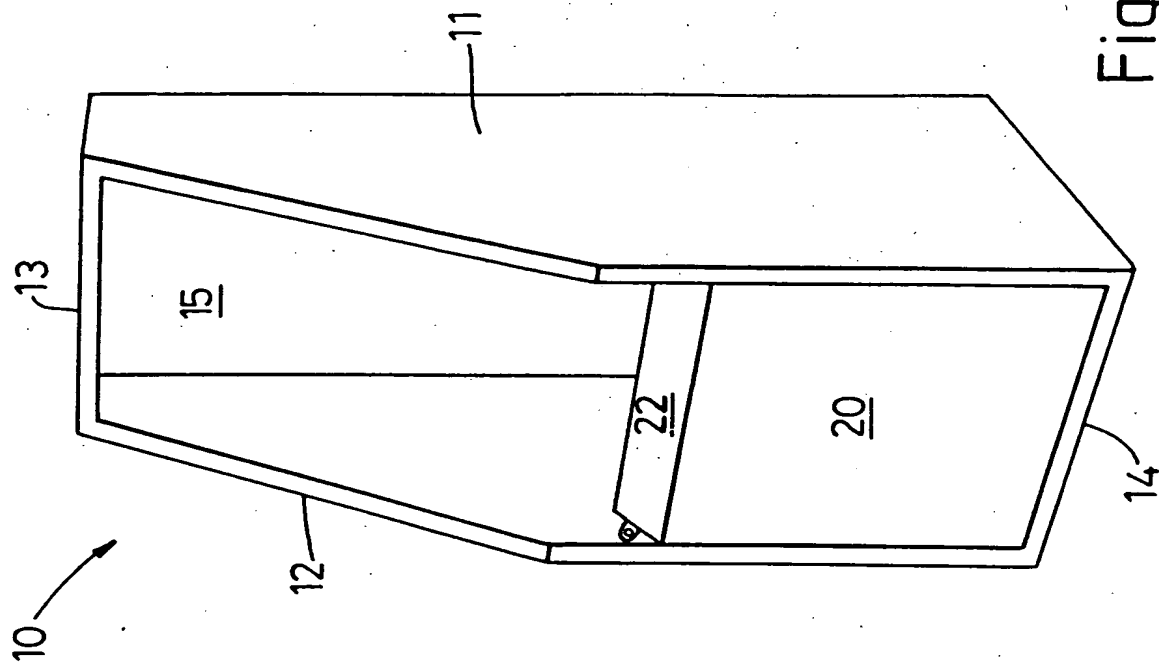


Fig. 1

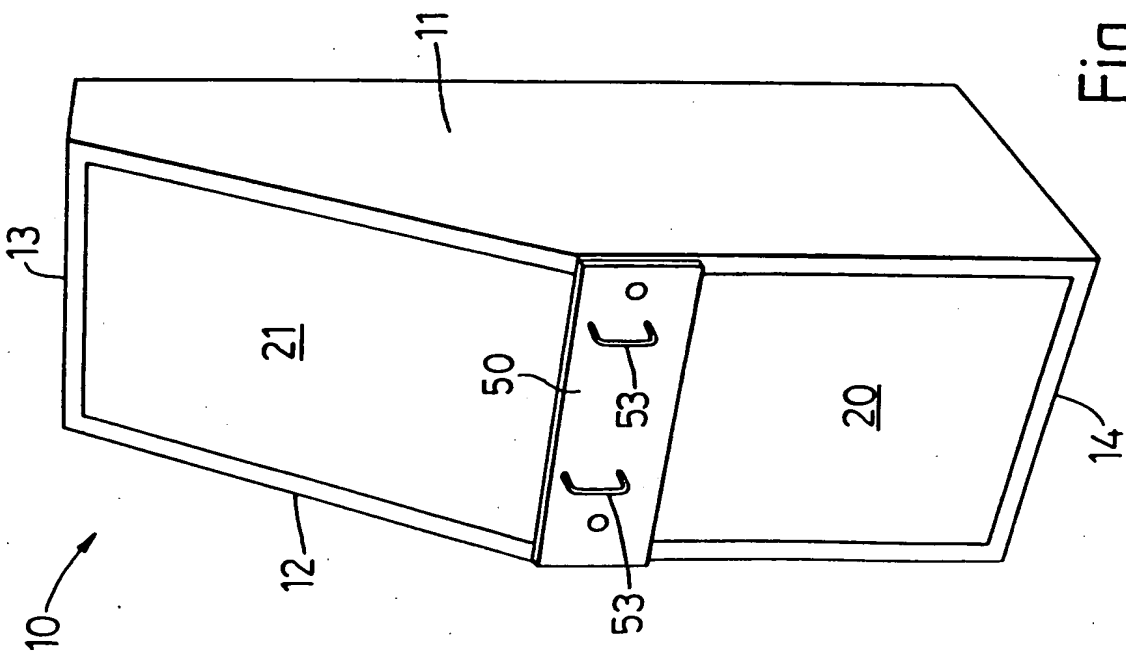


Fig. 2

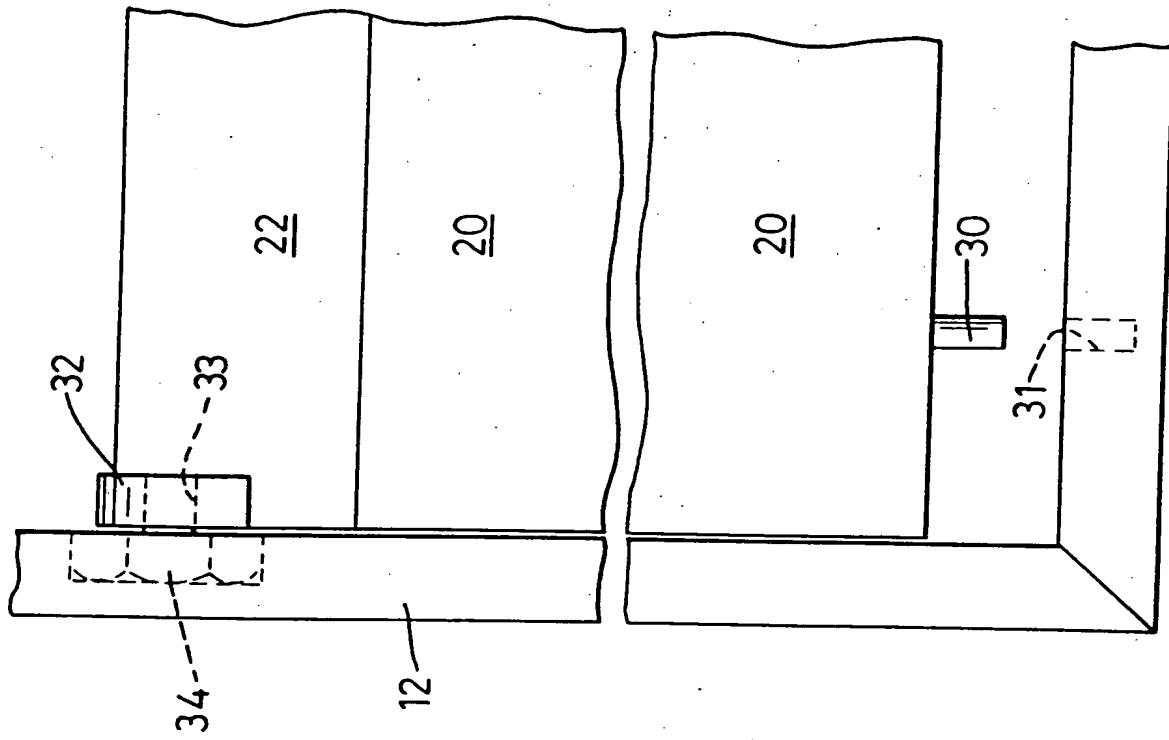


Fig. 4

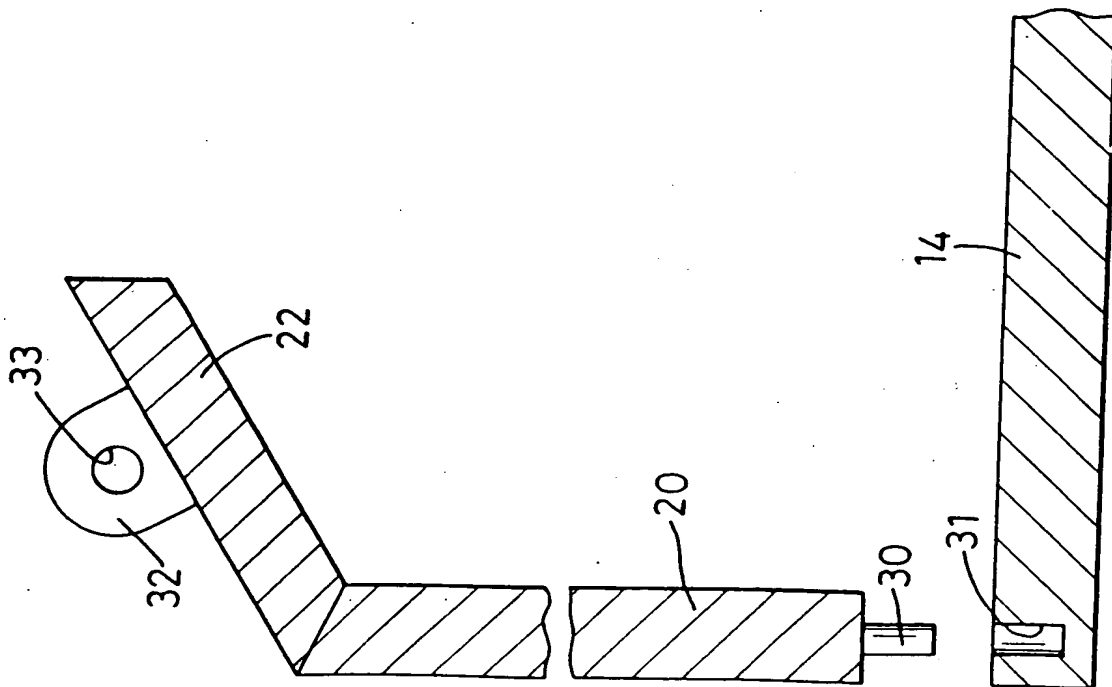


Fig. 3

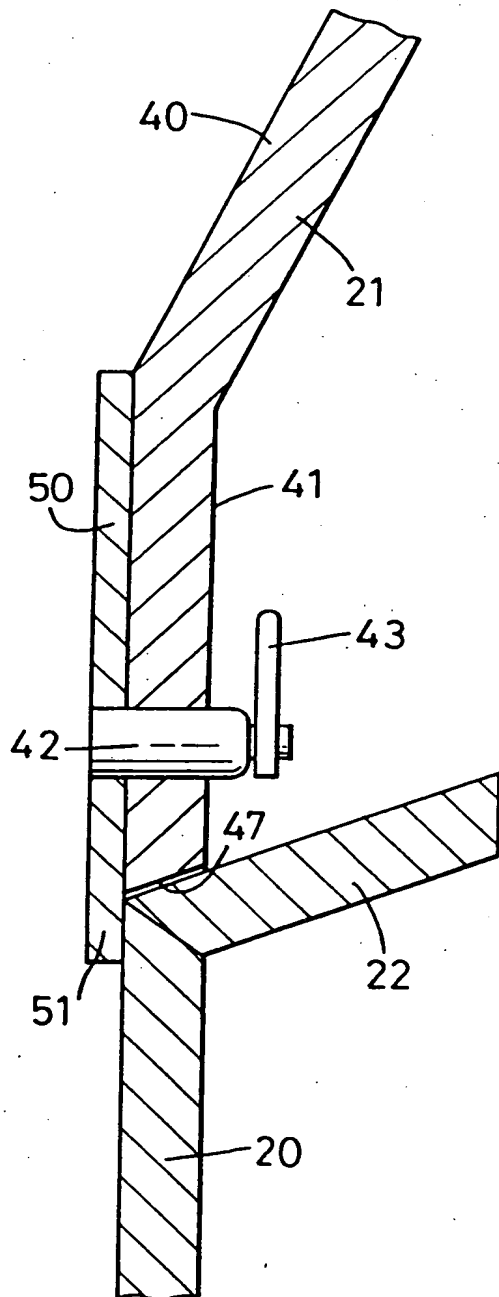


Fig. 5

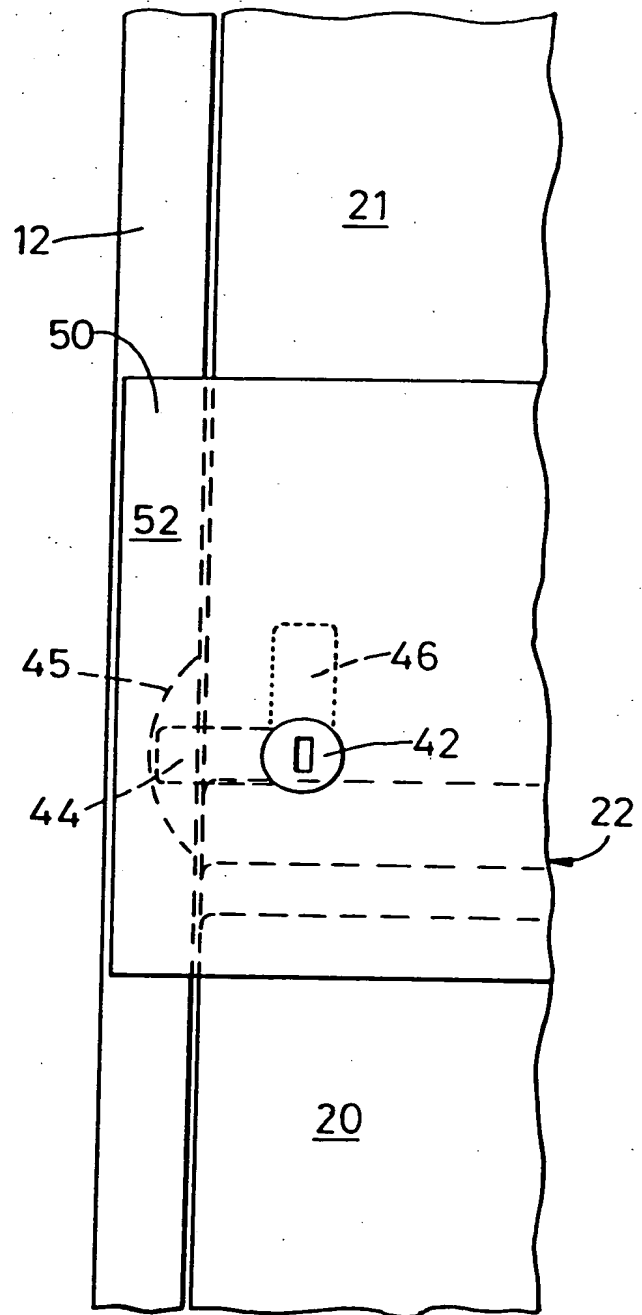


Fig. 6

SECURITY CABINET

The present invention relates to security cabinets for amusement machines such as those typically found in public houses, bars and arcades. In particular, the invention relates to cabinets providing a measure of protection to such amusement machines which have a front panel area to which access is required when the machine is in use.

It has become a particular problem that amusement machines such as gambling machines, video based arcade games and the like are vulnerable to vandalism and attack in order to steal money therefrom, to steal the machine itself, or simply through malicious behaviour. Particularly vulnerable are gambling machines which of necessity contain a substantial amount of money in order to facilitate payouts in the event of a win on the machine.

Such machines can be subject to attack not only when the premises in which they are situated are unattended, but also can be subject to physical abuse even when the premises are attended. It is therefore desirable to provide some form of protection for the machines which will provide a high degree of security and protection against theft when the premises are not attended, and also provides a reduced degree of security and protection even when the machines are in use.

Typically, such machines have a "playing surface" on the front side thereof which must be exposed during use, comprising the actuating buttons, display area and coin acceptance / payout facilities. Typically, the machines also have a front maintenance access for emptying coinboxes and general maintenance.

It would be desirable to provide a protective cabinet for such amusement machines which permits the various levels of access required to the machine while maintaining the highest degree of security.

5 According to the present invention there is provided a security cabinet for an amusement machine, comprising:

side, rear, top and base panels formed from high durability material and secured together to form a carcass adapted to enclose an amusement machine on all sides excepting the front side, and adapted to extend slightly forward of
10 the front face of an amusement machine positioned within the carcass and defining an aperture for access to the machine;

a lower front panel detachably mounted to said carcass within a lower portion of said aperture and including attachment means adapted to tightly engage with opposing inner faces of each of two side panels of said carcass,
15 said lower front panel adapted to obscure the lower portion of the front face of an amusement machine positioned within said carcass, but not to obscure an upper portion of the front face of an amusement machine positioned within said carcass; and

an upper front panel detachably mounted to said carcass within an upper
20 portion of said aperture and including locking attachment means adapted to engage with said carcass and said lower front panel to completely close the carcass aperture when in position.

Embodiments of the present invention will now be described by way of
25 example and with reference to the accompanying drawings in which:

Figure 1 shows a perspective view of a cabinet in accordance with one embodiment of the present invention and in a closed condition;

Figure 2 shows a perspective view of the cabinet of figure 1 with an
30 upper front panel removed;

Figure 3 shows a schematic cross sectional side view of a portion of the cabinet of figure 1 showing the connections of a lower front panel to the cabinet;

5 Figure 4 shows a schematic front view of the portion of the cabinet in figure 3;

Figure 5 shows a schematic cross sectional side view of a portion of the cabinet of figure 1 showing a locking mechanism of the upper front panel; and

Figure 6 shows a schematic front view of the portion of the cabinet of figure 5.

10

With reference to figures 1 and 2 there is shown a security cabinet 10 in accordance with one embodiment of the present invention. The cabinet includes two side panels 11,12 which are preferably shaped according to the profile of an amusement machine to be positioned inside the cabinet. Top panel 13, base panel 14 and back panel 15 complete the basic cabinet being secured together using known techniques. Preferably, to optimise security, the panels are secured together using concealed fixings accessible only from the inside of the cabinet, and may use mitred corners or the like minimizing vulnerability to the cabinet being prized apart. Corners and edges of the cabinet may also be strengthened with protective corner sections.

20

For improved security, the back and/or base panels 15,14 could be provided with apertures for the passage of bolts or other fixing means to secure the cabinet to the floor or wall of a building. Preferably, the back or side panels 15,11,12 are provided with appropriate apertures for the passage of electrical cables into the cabinet for supplying the amusement machine with power and any other electrical communication connections required. Ventilation slots may also be provided in appropriate panels, preferably constructed suitably to minimize loss of security.

30

The cabinet, when open, defines a front aperture through which the amusement machine may be passed to position it within the cabinet 10. Ideally, the cabinet is constructed of suitable dimensions to surround the amusement machine as closely as possible at the sides and top thereof.

5

Once an amusement machine (not shown) has been installed in the cabinet 10, a first, lower front panel 20 is detachably secured to the front of the cabinet to prevent removal of the machine, and to cover the lower extent of the machine to which access is not required during normal use of the machine.

10 Preferably, this lower front panel 20 covers the coin box and maintenance access to the machine, but allows full access to any actuating buttons, display area, and coin acceptance / payout facilities of the machine.

15 Preferably, the lower front panel 20 includes an upper, inwardly projecting ledge 22 which covers any gap present between the front of the amusement machine and the inside edge of the front panel. Such a feature prevents access to the lower part of the machine from above, and prevents the accidental descent of articles into the cabinet from above. For example, when
20 a user of the machine is retrieving coins from a payout receptacle above, it is not uncommon for coins to be dropped. Inwardly projecting ledge 22 will provide a deflection panel to cause such coins to drop out onto the floor, and not inside the cabinet 10.

25 The inwardly projecting ledge 22 also serves to allow for some variation in the sizes of machine suitable to a particular cabinet. Different sizes of ledge can be manufactured to accommodate small variations in the depth of the machine, and small variations in the height to which the lower front panel 20 should extend.

The lower front panel 20 is secured to the cabinet in any suitable manner: an exemplary technique is described with reference to figures 3 and 4. Figures 3 and 4 represent a partial cross-sectional side view and partial front view respectively of the lower front panel 20 and its connections to the cabinet base panel 14 and cabinet side panel 12. The lower edge of front panel 20 includes at least two downwardly protruding rods 30 (only one of which is visible in the figures), preferably located substantially to the left and to the right of the lower front panel 20 as viewed from the front. These rods cooperate with appropriately dimensioned recesses 31 in the upper surface of base panel 14. The lower front panel 20 is dropped into place from above, the rods 30 engaging with recesses 31.

It will be understood that the rods and corresponding recesses could be replaced by a number of alternatives: for example, the rods could be replaced by a downwardly projecting shoulder extending along the entire width of the lower front panel 20 which would engage with a corresponding groove rebated into the upper surface of the base panel 14.

At the top of lower front panel 20, preferably on the inwardly projecting ledge 22 there is provided a lug 32 including a bolt hole 33 allowing passage of a hex bolt or the like therethrough to engage with a threaded socket or nut 34 welded or otherwise fixed in the side panel 12. Such a bolt (not shown) could be of standard hexagonal head design, or be of the recessed, hex key design, or for additional security have a keyed head to prevent easy removal. The action of the bolt serves several purposes. Firstly, it secures the lower front panel 20 in position once the rods 30 are engaged with recesses 31. Thus the panel 20 cannot be lifted out. The lugs 32 are also preferably situated on corresponding opposite sides of the lower front panel 20, and when bolts are tightened therethrough, the front panel effectively provides a lateral tie-bar between the two side panels 11,12 at approximately mid-height of each. Such

a tie-bar effectively prevents access to the cabinet being achieved by levering of the side panels 11,12 apart with, for example, a crow bar or the like.

5 The threaded sockets 34 might alternatively pass right through their respective side panels 11,12 and include a domed head on the outer wall of the respective side panel 11,12.

10 In the preferred embodiment of figures 1-4, the lower front panel 20 is of appropriate dimensions to fit within the aperture defined by the cabinet 10, the front surface of the front panel lying flush with the front edges of side panels 11,12 and base panel 14. However, it will be understood that the front panel could be oversized to cover the front edges of side panels 11,12 and base panel 14.

15 The amusement machine positioned within cabinet 10 may be operated with the lower front cover 20 secured in position, leaving the "playing surface" of the machine exposed above the lower front panel 20. The amusement machine is then partially protected against vandalism and attack, and is particularly protected from unauthorised access to the coin box access panel of
20 the machine, and malicious kicking of the lower part of the machine. This is particularly suitable for protection of the machine in premises where completely continuous supervision is not practicable even when the machine is in use.

25 Referring now to figure 5 and 6, there is shown a presently preferred embodiment of a lockable securing means for the upper front panel 21 of the cabinet 10. Upper front panel 21 is placed in position to completely enclose the amusement machine at times when the machine is not in use, and when maximum security is required — for example when the premises are unattended.

Figure 5 shows a partial cross-sectional side view of the relevant portions of the lower and upper front panels 20,21 and figure 6 shows a corresponding front view of the arrangement of figure 5.

5 Upper front panel 21 preferably comprises a first, sloping section 40 which conforms to the upper profile of the side panels 11,12, and thus to the approximate profile of the amusement machine positioned inside the cabinet, together with a second section 41 in angular relation to the first section 40 which conforms to the lower profile of the side panels 11,12. It will be
10 understood that if the machine is of rectangular side profile, then the angularly related two-part construction of upper front panel 21 will not be required.

 The top edge of upper front panel 40 includes at least two upwardly projecting rods which are adapted to engage with corresponding recesses in the
15 lower surface of top panel 13 in analogous manner to that which has already been described with reference to the lower front panel 20 (see figures 3 and 4) and this arrangement is thus not shown in figures 5 and 6. Lower section 41 of upper front panel 21 includes a lockable securing means which includes two
20 barrel locks 42 (only the left hand one shown) which projects through the panel 41 to provide key access at the front thereof, and a locking bar 43 at the rear thereof. The locking bar 43 rotates, under the action of a key, to a first position 44 shown in figure 6 in dashed outline to engage with a slot 45 recessed into the inside surface of side panel 12, thus securing the upper front panel in position. The locking bar 43 rotates, under the action of a key, to a
25 second position 46 shown in figure 6 in dotted outline to disengage from slot 45 in order to facilitate removal of the upper front panel 21 from the cabinet
10.

 Section 41 may also include a profiled lower edge 47 which is adapted
30 to come into engagement with the inwardly projecting ledge 22 of lower front

panel 20 when the upper front panel 21 is placed in position, thereby preventing the upper front panel 21 from falling downwards.

For improved security, a metal cover plate 50 is also preferably provided
5 over section 41 which extends downwardly to provide an overlap portion 51
which covers the joining edges of upper and lower front panels 20,21 at the
profiled edge 47. The cover plate 50 also preferably extends laterally to
provide two overlap portions 52 (only one of which is shown in figures 5 and
6) which cover the respective joining edges of the side panels 12,11 and upper
10 and lower front panels 20,21. This provides further security against leverage
of the side panels 12,11 away from the front panels 20,21 and thereby protects
locking bar 43 from attack through any gap between side and front panels
effected by such action.

15 It will be understood that the cabinet provides a mirror image
arrangement to that of figure 6 on the right hand side.

In a preferred embodiment, a pair of handles 53 (figure 1) are bolted to
the front surface of cover plate 50 to provide suitable means to lift the upper
20 front cover into and out of position. Alternatively, these handles might be
provided on the upper section 40 and lower section 41 respectively of upper
front panel 21.

In the preferred embodiment of figures 5 and 6, the upper front panel
25 20 (excluding cover plate 50) is of appropriate dimensions to fit within the
aperture defined by the cabinet 10, the front surface of the front panel lying
flush with the front edges of side panels 11,12 and top panel 13. However, it
will be understood that the front panel could be oversized to cover the front
edges of side panels 11,12 and top panel 13, in which case the cover plate 50
30 may be superfluous.

The sides, top, base, back and front panels of the cabinet are manufactured from any suitable impact resistant material, and are preferably formed in board faced with 16-gauge steel or the like, and are preferably double skinned.

CLAIMS

1. A security cabinet for an amusement machine, comprising:

side, rear, top and base panels formed from high durability material and
5 secured together to form a carcass adapted to enclose an amusement machine
on all sides excepting the front side, and adapted to extend slightly forward of
the front face of an amusement machine positioned within the carcass and
defining an aperture for access to the machine;

10 a lower front panel detachably mounted to said carcass within a lower
portion of said aperture and including attachment means adapted to tightly
engage with opposing inner faces of each of two side panels of said carcass,
said lower front panel adapted to obscure the lower portion of the front face of
an amusement machine positioned within said carcass, but not to obscure an
upper portion of the front face of an amusement machine positioned within said
15 carcass; and

an upper front panel detachably mounted to said carcass within an upper
portion of said aperture and including locking attachment means adapted to
engage with said carcass and said lower front panel to completely close the
carcass aperture when in position.

20

2. A security cabinet according to claim 1 wherein said lower front panel
includes a upper ledge projecting inwardly from the front face of said lower
front panel to such an extent that said ledge terminates in close proximity to the
front face of an amusement machine positioned within the carcass.

25

3. A security cabinet according to claim 1 wherein said lower front panel
is adapted to fit within the aperture defined by said carcass, and includes at
least one projection from the lower edge of said lower front panel adapted to
engage with a corresponding recess in the upper surface of the base of said
30 carcass and thereby prevent movement of said lower front panel parallel to the

upper surface of the base, and wherein said attachment means of said lower front panel is adapted to prevent movement parallel to the sides of said carcass.

5 4. A security cabinet according to claim 1 wherein said upper front panel includes a first portion adapted to fit within the aperture defined by said carcass and a second portion adapted to overlay the aperture and a part of leading edges of the side panels of said carcass.

10 5. A security cabinet according to claim 4 wherein said upper front panel is adapted to cover the portion of the front surface of an amusement machine positioned in said carcass for which access is required during the playing of the machine.

15 6. A security cabinet according to any preceding claim wherein the side, rear, top, base and front panels of the cabinet are constructed from board material skinned with steel.

7. A security cabinet substantially as described herein with reference to the accompanying drawings.

Relevant Technical Fields

(i) UK Cl (Ed.M) G4V (VBH) E2X (X7)

(ii) Int Cl (Ed.5) G07F 9/10 E05G 1/026

Databases (see below)

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii)

Search Examiner
G NICHOLLSDate of completion of Search
14 JUNE 1994Documents considered relevant
following a search in respect of
Claims :-
1-7

Categories of documents

- X: Document indicating lack of novelty or of inventive step. P: Document published on or after the declared priority date but before the filing date of the present application.
- Y: Document indicating lack of inventive step if combined with one or more other documents of the same category. E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.
- A: Document indicating technological background and/or state of the art. &: Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages	Relevant to claim(s)
A	GB 2241285 A (SHUTTERS OF SUBSTANCES)	
A	EP 0468561 A2 (GROSS 1) see especially column 5 lines 8-21	

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